

(12) UK Patent Application (19) GB (11) 2 294 839 (13) A

(43) Date of A Publication 08.05.1996

(21) Application No 9422172.8

(22) Date of Filing 03.11.1994

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(51) INT CL⁸

H04M 11/04, G08B 25/10

(52) UK CL (Edition O)

H4K KOB

(56) Documents Cited

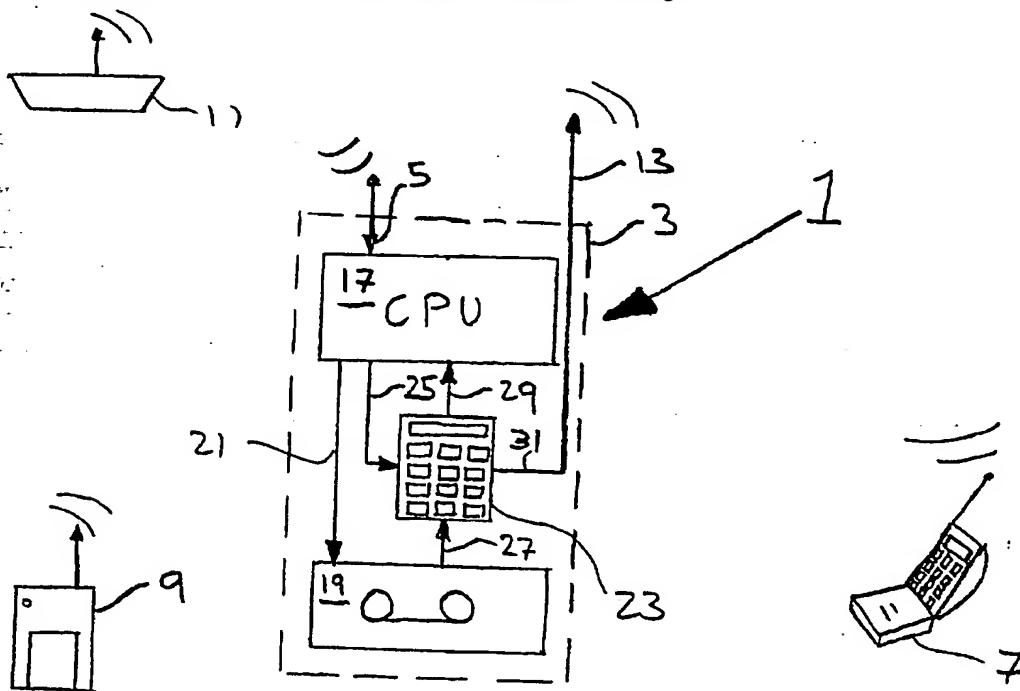
GB 2282025 A GB 2281675 A GB 2263605 A
GB 2250400 A GB 2194119 A GB 2191365 A
GB 2138981 A

(58) Field of Search

UK CL (Edition O) H4K KOB, H4L LDA
INT CL⁶ G08B, H04M, H04Q

(54) Security apparatus

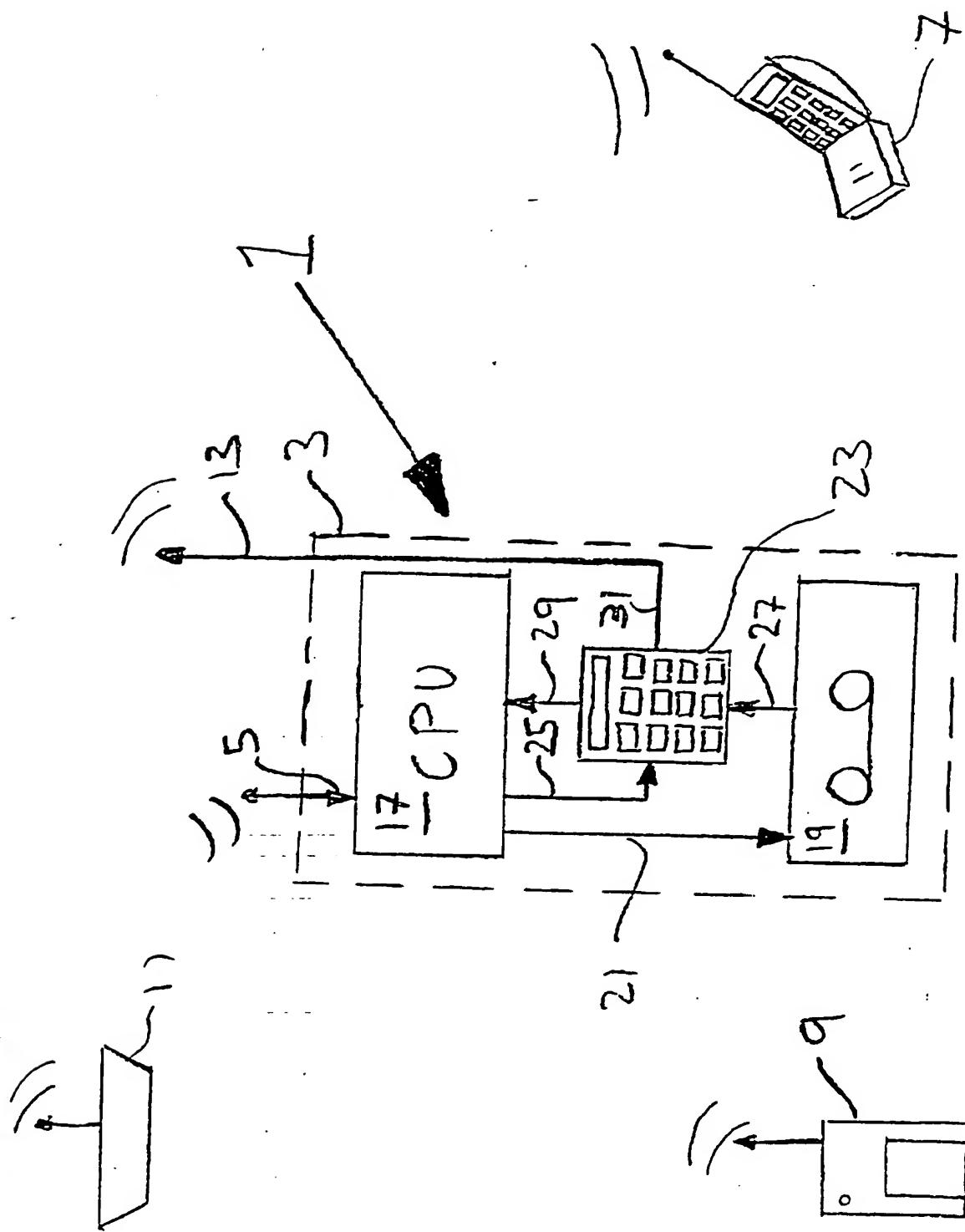
(57) A security apparatus (1) for connection to a mobile telephone network, has a control unit (17) actuatable by at least one sensor (9, 11) such as a motion or smoke detector. The apparatus (1) includes an auto-dialler (23), and means (19) for storing at least one recorded message. In use, the detection by a sensor (9, 11) of an intruder and/or smoke results in the unit (17) activating the auto-dialler (23) to dial a preselected number and on receiving an answer commencing playback of a selected message.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995

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Security apparatus

The present invention relates to a security apparatus for buildings and/or vehicles.

With rising levels of crime it has become common to protect unattended premises and vehicles with some form of security apparatus or alarm system. Where the premises are a building it is known to provide an alarm system having the capability of automatically dialling either the police or more usually a central control room operated by a private security company. However, there exists a need for protection of not only fixed premises such as buildings but also vehicles, boats, and other mobile premises such as caravans and temporary accommodation cabins. Unfortunately, such premises frequently do not have a permanent connection to the telephone network and in the case of caravans and the like may need to be protected for short periods only of the year.

It is therefore an object of the present invention to provide a security apparatus which overcomes the limitations of the prior art, and which is transferable between premises or vehicles, boats, and caravans to be protected.

According to the present invention there is provided a security apparatus for connection to a mobile telephone network, comprising a control unit actuatable by at least one sensor, said unit including an auto-dialler, and means for storing at least one recorded message, such that on actuation of said unit said auto-dialler dials a preselected number and on receiving an answer commences playback of a selected message.

Although such an apparatus could be adapted for connection to a standard domestic telephone jack, a more attractive option might be for the apparatus to comprise a wireless telephone connection to a mobile telephone network. Such an apparatus could be installed on the network as a dedicated alarm device without the full communication capability of a mobile telephone, and might thus be offered by a mobile telephone network operator as an accessory to an existing mobile telephone subscriber at a reduced rate tariff based upon the statistical probability of such a device occupying air time. The installation of such a device would preferably then be conditional upon the allocation of only the mobile telephone subscriber's telephone number as the number to be dialled by the alarm system. Conveniently the device is of the nature of a wireless base station powered from the main power or battery supply of the premises, or vehicle, or boat, or caravan to be secured.

Advantageously, the device may be actuatable by more than one sensor each of which includes a radio transmitter which broadcasts an alert signal receivable by said apparatus. More than one recorded message may then be stored by the device and may be selected to correspond to the nature of the sensor from which a signal is received. The sensor may be a motion detector such as an ultrasonic detector, or a fire detector such as a smoke detector or a passive infra-red detector (PIR).

In order to aid in understanding the invention a specific embodiment thereof will now be described by way of example and with reference to the accompanying drawing, in which the sole Figure is a diagrammatic view of a security apparatus according to the invention.

The security apparatus 1 shown in the Figure is contained within an enclosure 3 which also incorporates circuitry (not shown) for transmission to a mobile telephone network. The apparatus 1 has an input antenna 5 for reception of alert broadcasts from a motion detector 9, and a smoke detector 11 respectively, each being equipped with a radio transmitter (not shown). A further antenna 13 provides for output to the telephone network and hence to a remote mobile phone 7.

The apparatus 1 has a central processing unit (CPU) 17 which receives signals from the input antenna 5 indicative of the state of each detector 9,11. The CPU 17 controls a message reproduction device 19 via connection 21 and an auto-dialler and keypad 23 via connection 25. The auto-dialler 23 is arranged to receive a message input 27 from the device 19 and to provide control/programming signals 29 to the CPU 17, in addition to an output signal 31 provided via said circuitry to the antenna 13 for transmission to the mobile telephone network.

In use, the keypad of the auto-dialler 23 is used to program the CPU 17 prior to activating the apparatus 1. On activation of a detector 9,11, a coded signal is broadcast for reception by the antenna 5. The CPU 17 then identifies the nature of the alert, and causes the auto-dialler 23 to dial a pre-stored number thereby initiating connection to the mobile telephone network. Once the call has been answered by the remote mobile phone 7, the CPU 17 activates the device 19 to play back a message appropriate to the nature of the alert which is transmitted via the mobile phone 3.

Advantageously, the apparatus 1 may be programmed with a set of contact numbers which, if the first call is not answered within a predetermined number of rings, the CPU 17

causes the auto-dialler 23 to ring a second pre-stored number. Further pre-selected numbers will be dialled until such time as the call is answered. Depending on the number dialled the CPU 17 may also be programmed to select a different message to be played by the device 19 which is suitable for the prospective recipient of the call e.g. the fire brigade or the owner of the property, vehicle, boat, or caravan protected by the apparatus.

It will be appreciated by one skilled in the art that the invention is not intended to be limited by the above embodiment. For instance the apparatus may use a single antenna both for reception of signals from the sensors and for transmission to the telephone network. Furthermore, the CPU may be programmable with security codes to prevent unauthorised access to the apparatus, whilst the nature of the detectors or sensors connected to the apparatus may be varied to suit the application of the apparatus e.g for use in a vehicle, boat, caravan or a building.

CLAIMS:

1. A security apparatus for connection to a mobile telephone network, comprising a control unit actuatable by at least one sensor, said unit including an auto-dialler, and means for storing at least one recorded message, such that on actuation of said unit said auto-dialler dials a preselected number and on receiving an answer commences playback of a selected message.
2. An apparatus as claimed in Claim 1, further including wireless telephony means to facilitate connection to the mobile telephone network.
3. An apparatus as claimed in Claim 1 or Claim 2, which includes storage means for a plurality of pre-selected telephone numbers such that, on actuation of said unit, each pre-selected number is dialled in turn by said auto-dialler until an answer is received.
4. An apparatus as claimed in any preceding Claim, wherein the control unit determines the nature of the sensor causing activation thereof and selects a corresponding recorded message for playback.
5. An apparatus as claimed in any preceding Claim, in which the sensor includes a radio transmitter which broadcasts an alert signal receivable by said control unit.
6. A security apparatus for connection to a mobile telephone network substantially as described herein with reference to the sole figure of the accompanying drawings.

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Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

Application number
GB 9422172.8

Relevant Technical Fields		Search Examiner AL STRAYTON
(i) UK CI (Ed.N)	H4K: KOB. H4L: LDA.	
(ii) Int CI (Ed.6)	G08B, H04M	Date of completion of Search 18 JANUARY 1996
Databases (see below)		Documents considered relevant following a search in respect of Claims :-
(i) UK Patent Office collections of GB, EP, WO and US patent specifications.		ALL
(ii)		

Categories of documents

X:	Document indicating lack of novelty or of inventive step.	P:	Document published on or after the declared priority date but before the filing date of the present application.
Y:	Document indicating lack of inventive step if combined with one or more other documents of the same category.	E:	Patent document published on or after, but with priority date earlier than, the filing date of the present application.
A:	Document indicating technological background and/or state of the art.	&:	Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X, Y	GB 2282025 A	(STEHLE) entire document	X: 1, 2 Y: 3-5
Y	GB 2281675 A	(BRANDES) page 7, lines 20-32	4
Y	GB 2263605 A	(SAMSUNG) page 4, lines 11-15; page 7, lines 12-16	4, 5
Y	GB 2250400 A	(MCDougall) page 5, line 19 to page 6, line 19	3
X, Y	GB 2194119 A	(SECURITY) entire document	X: 1-3 Y: 4, 5
X, Y	GB 2191365 A	(MITCHELL) entire document	X: 1, 2 Y: 3-5
Y	GB 2138981 A	(GULF & WESTERN) Abstract; Figure 13	3-5

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).